

Regional Haze

MassDEP SIP Stakeholder Meeting

January 31, 2006

What is regional haze?

- Visibility impairment caused by the cumulative emission of air pollutants from numerous sources over a wide geographic area.
- The primary cause of visibility impairment is the scattering and absorption of light by fine particles.

Great Gulf Wilderness 125 Mm-1
21 $\mu\text{g}/\text{m}^3$
25 dv



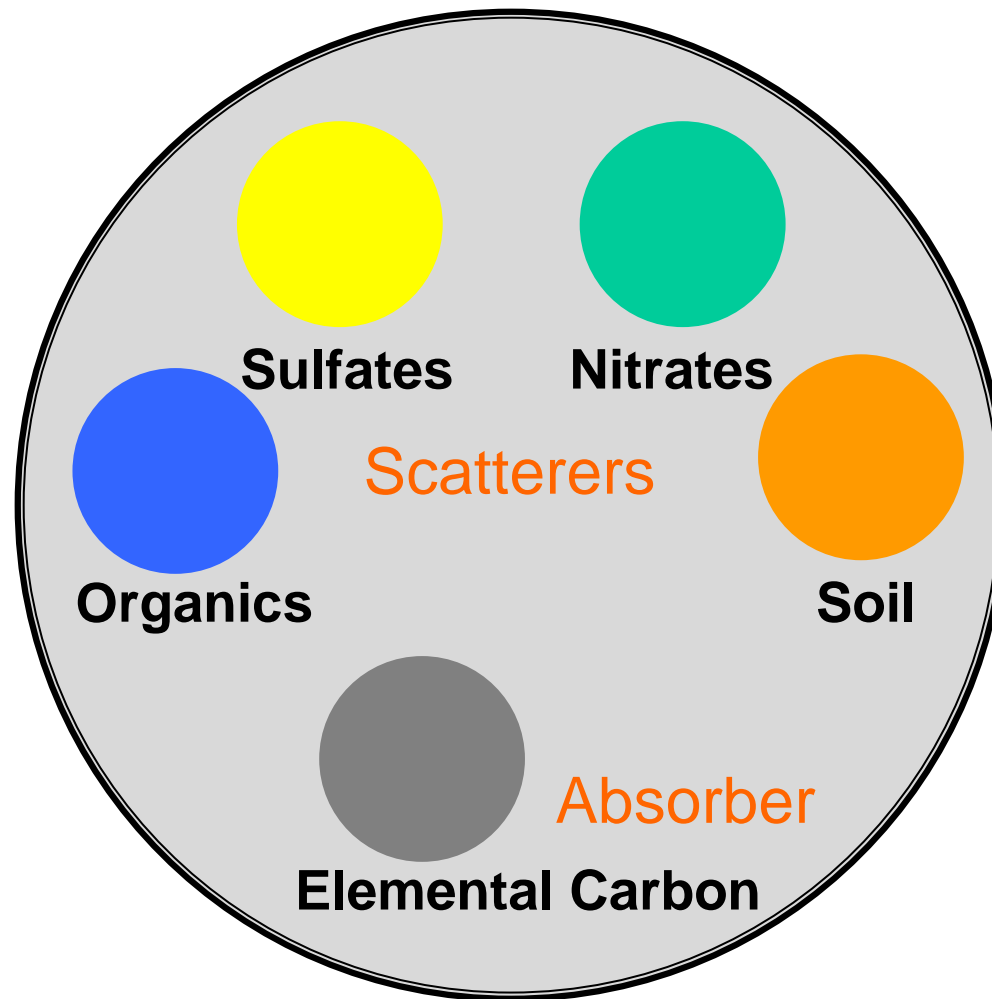
Great Gulf Wilderness 35.8 Mm-1
8 $\mu\text{g}/\text{m}^3$
13 dv



Where do fine particles come from?

- Local emissions including mobile, stationary and area source emissions
- Transported emissions; SO₂ emissions from large combustion facilities
- Meteorological transport and atmospheric chemistry also result in the formation of secondary pollutants which are converted into fine particles

What do fine particles consist of?



What are Applicable Rules?

- Final 1999 Regional Haze Rule (7/1/99)
- Final Clean Air Visibility Rule (6/20/05)
 - Preamble
 - Final BART Guidelines

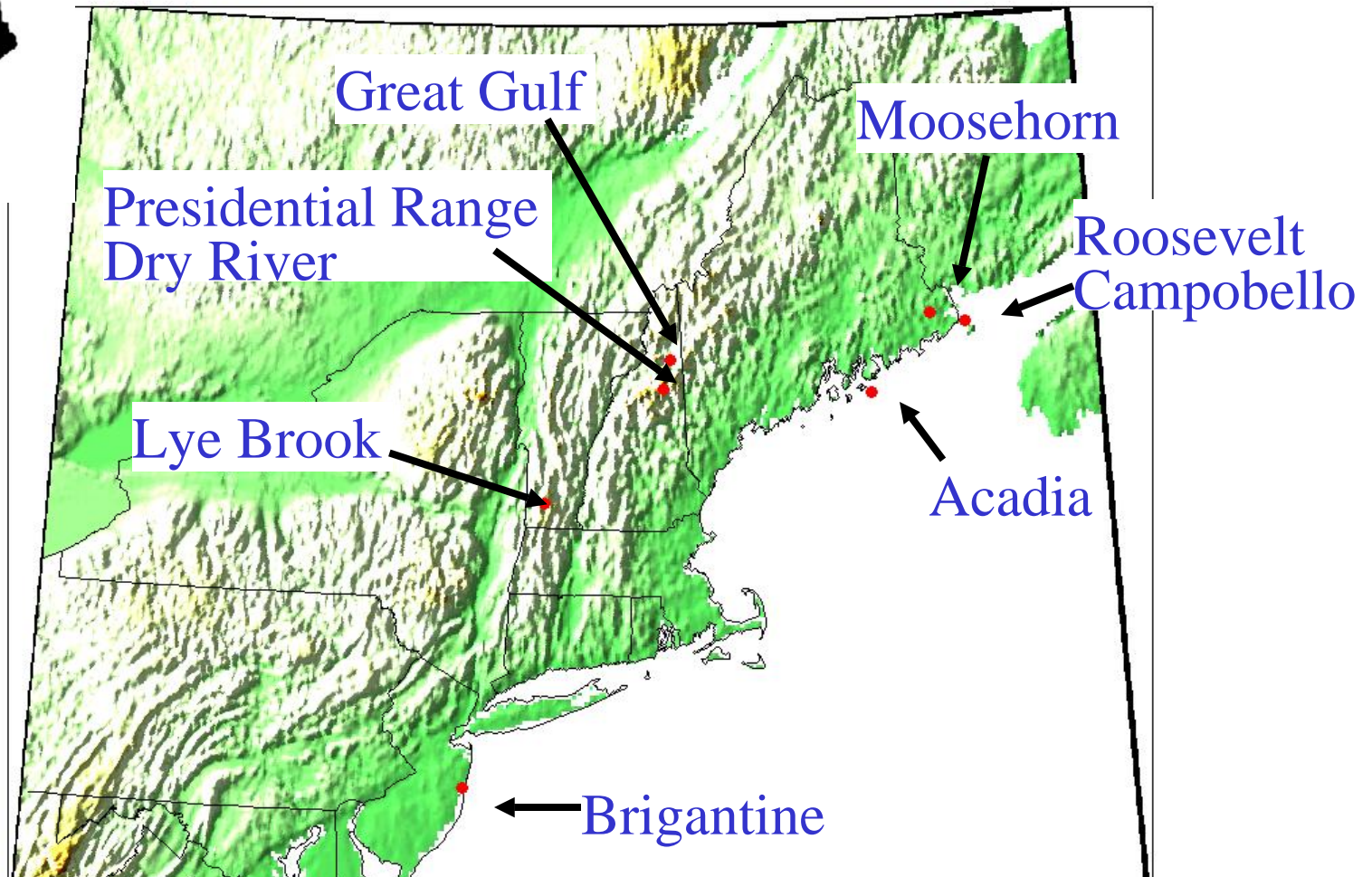
What is the goal of the 1999 Regional Haze Rule?

- To achieve natural background visibility conditions in all Class I Areas by 2064

(156 national parks and wilderness areas in the United States are designated as Class I Areas)

NESCAUM

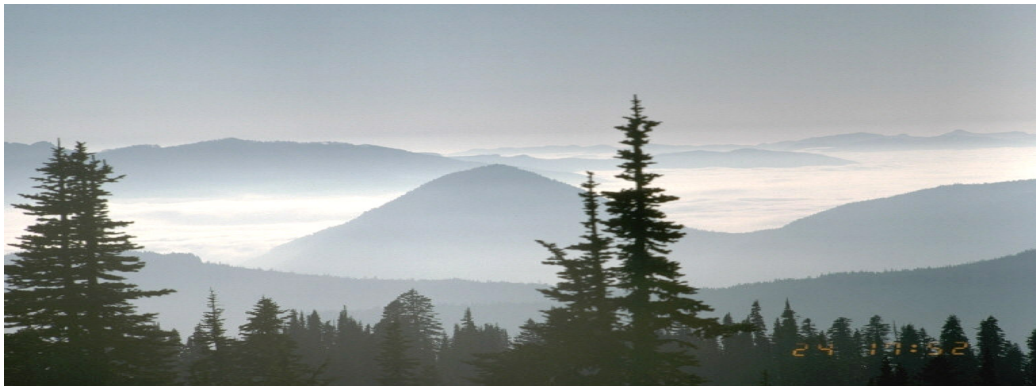
Northeast States for
Coordinated Air Use
Management



Class I areas in the
MANEVU RPO Region

Core Requirements of Regional Haze Rule

- Calculation of Baseline & Natural Visibility Conditions
- Reasonable Progress Goal for 2018
- BART
- Long-term Strategy (control measures needed to achieve reasonable progress goal)



Calculation of Baseline & Natural Visibility Conditions for Class Areas (Class I Area States)

Visibility in MANE-VU Class I Areas

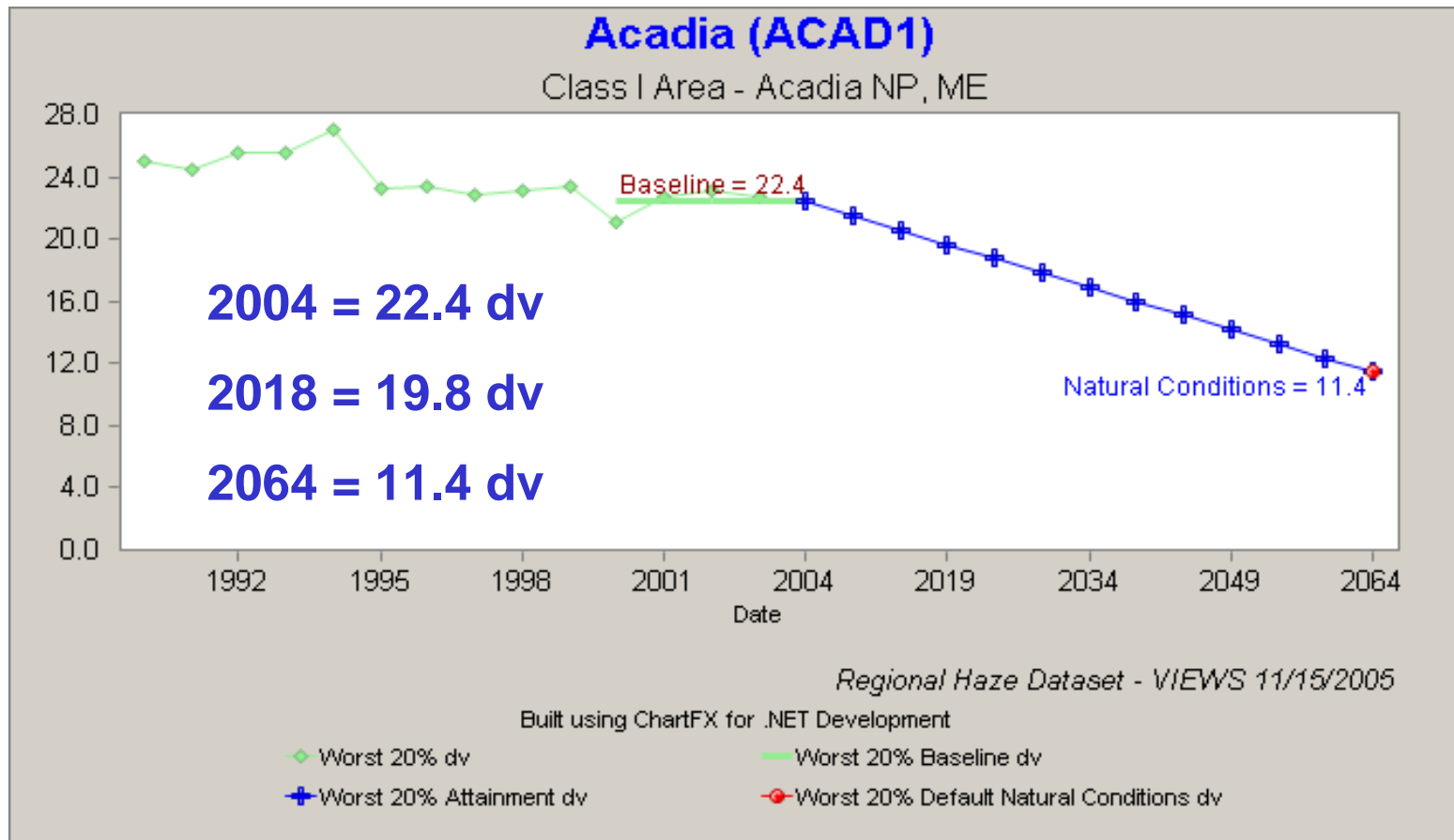
	Est Baseline Worst 20% Days (in deciviews)	Est. Natural Visibility Worst 20% Days (in deciviews)
Acadia National Park	22.86	11.45
Moosehorn Wilderness	21.53	11.36
Roosevelt Campobello	21.53	11.37
Lye Brook Wilderness	24.24	11.25
Great Gulf Wilderness	TBD	11.30
Presidential Range	TBD	11.30
Brigantine Wilderness	27.92	11.28

Determine Reasonable Progress
(Class I Area states

Reasonable Progress Goal for 2018 Section (d)(1) of 40 CFR 51.308

- Establish baseline visibility (2000-2004)
- Estimate natural visibility conditions for 2064
- Estimate 2018 goal needed to ensure natural conditions attained by 2064
- Estimate emission reduction required to reach 2018 Goal

Reasonable Progress Goal for 2018 at Acadia Park is 19.8 DV



Implement BART Program (All States)

Best Available Retrofit Technology

Section (e) of 40 CFR 51.308

- List all BART-eligible sources
- Determine if sources contribute to visibility impairment – those sources will require BART
- Determine BART for each source
- Justify sources that are exempt
- May examine/establish a trading program

Prepare Long-term Strategy to
Achieve Reasonable Progress Goal
(All States)

Long Term Strategy Requirements

Section (d)(3) of 40 CFR 51.308

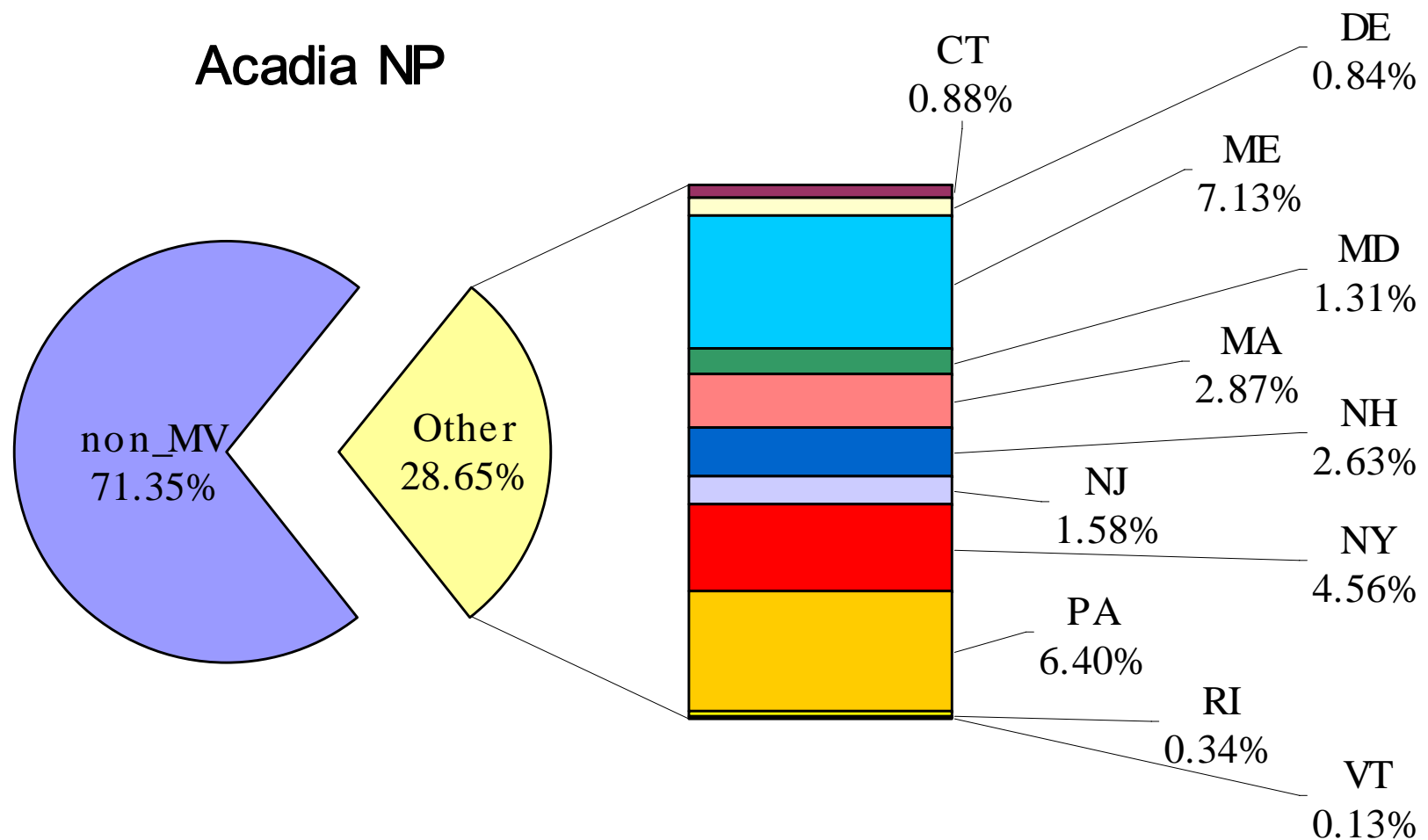
- Required for each Class I area
- Must include enforceable emissions limits and compliance schedules
- Must achieve reasonable progress goal by 2018

Long Term Strategy Requirements

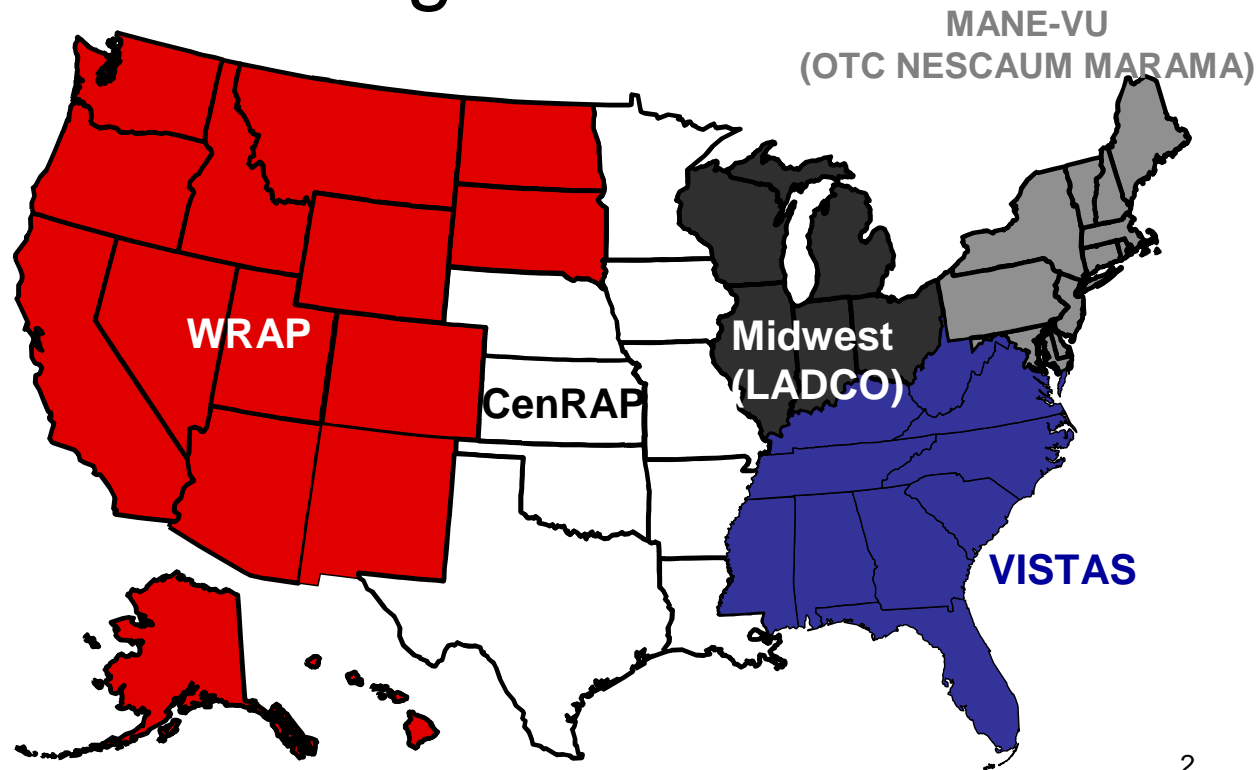
Section (d)(3)(i-iii) & (i)(2) of 40 CFR 51.308

- States must consult with each other and FLMs
- State must document basis for its share of reductions
- Strategy must achieve reductions agreed to through RPO process

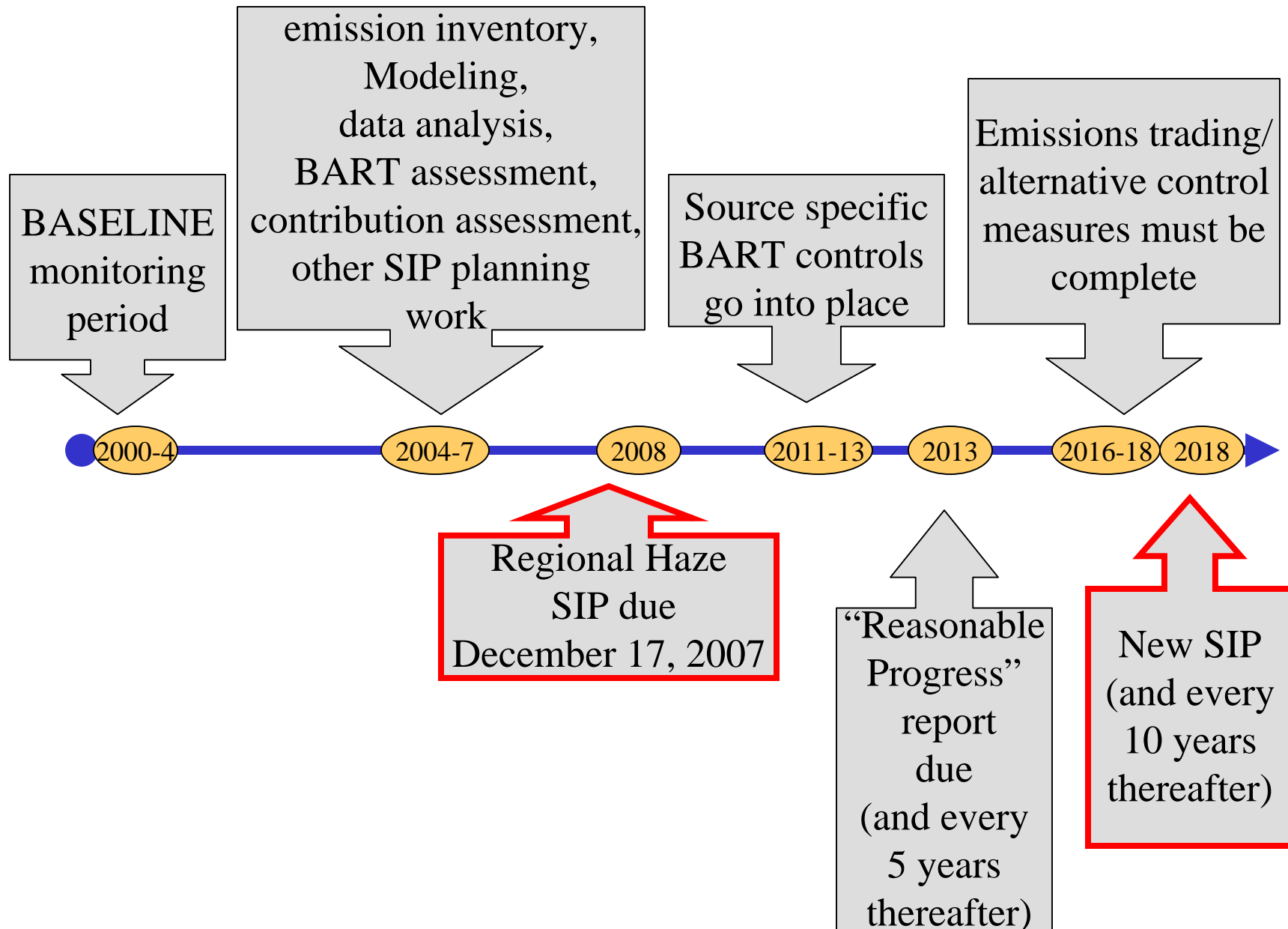
Contribution to PM sulfate in a receptor site



Regional Planning Organizations



REGIONAL HAZE SIP TIMELINE



What's next?

- Finalize NESCAUM contribution assessment report by February 2006
- Finalize BART-eligible source list for each state
- Model impacts of anticipated emission reductions including CAIR, BART, and other measures needed to attain the ozone and PM NAAQS
- Evaluate model results and determine if additional needed to achieve the 2018 rate of progress goal